

Work Order ID 60606

Thursday, July 15, 2010 10:23:54 AM



Page 1

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

[Signature]

Date: 10-7-15 Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A *[Signature]*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foilo 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

DP 10-7-20

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

M 10/7/20

3- weld fwd cap as per dwg D3274 and OSI004

AR Aluminum Rod Batch: M112507/m114242

BE 10/07/20

4- grind fwd cap weld on top surface only

BE 10/07/20

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

M 10/7/20

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



HandFinish

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

Hand Finishing

1 4/10/7/21

130



QC

QC3- Inspect Part Finish

0.00

Memo

0.00

Quality Control

8/10/7/21

140



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

8/10/7/21

ⓧ

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ 7/15/10 ☐Sikaflex expire date: ☐ 01/2011 ☐Start: ☒ 2407/10 Time: ☒ 3:45Finish: ☒ 10/3/10 Time: ☒ 8:30

(Adhere for 12 hours)

M 10/7/21

BE 10/07/21

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

S 10/10/22



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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo 1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position. 2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" . Debur 3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES 4- Countersink crossbolt spacer holes as per Dwg D3274 5- prepare for welding	0.00							
180 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo h ² 3.0" L ² 4.6" S skid tube	0.00							

7/10/7/27

(10)

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Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod ☒ M12507

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

BE 10/07/27
DD 10-7-28
S 10/07/28
KO

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8:10/7/28



220



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

=> JV 10/07/28

1

0

230



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

0.00

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

8:30
320°
9:00

1 BR 10-7-29.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00							
Quality Control									
250	HandFinishing	0.00							
HandFinish	Memo	0.00							
Hand Finishing	1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R□□Sikaflex-291 □ <u>119945</u> □□								
	2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/R□□Sikaflex-291 □ <u>115114</u> □□ Sikaflex expire date: □ <u>11/01</u> □								
260	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control	Inspect Nut Plate & Inserts								

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	HAND FINISHING RESOURCE #1	0.00							
	HandFinish								
Hand Finishing	<p>Memo</p> <p>1-Install wearpads & gaskets as per Dwg D3274.</p> <p>2-Install ring as per Dwg D3274 A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 115114 <input type="checkbox"/> Sikaflex expire date: <input type="checkbox"/> 11/01</p> <p>3-Inspect for foreign objects as per QSI 024</p> <p>4-Spray inside of tube on both sides of web with LPS-3 A/R LPS-3 Batch: _____ N/A</p> <p>5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive. A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 115114 <input type="checkbox"/> Sikaflex expire date: <input type="checkbox"/> 11/01</p>	0.00							
280	QC5- Inspect part completeness to step on W/O	0.00							
	QC								
Quality Control	Memo	0.00							

ml 10 08 24 (1)

50/09/26

(20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

290

Identify as per dwg & Stock Location: _____

0.00

PP 60606

10/8/06sf



Packaging

Memo

0.00

Packaging

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/27

mf

10-8-26

W/O:		WORK ORDER CHANGES					
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Thursday, July 15, 2010 10:23:58 AM

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010**Required Date:** 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	32.0000	1	1			
Extrusion Round 3" 206													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG	(47575)	(C)		32					
								32					
D3285-1 		Manufactured	No			110	Each	149.0000	1	1			
Cap													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG				149					
					52511			74					
					52647			75					
D3282-041 		Manufactured	No			150	Each	9.0000	1	1			
Float Web (266L/407)													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG				9					
					59886			9					

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Picklist Print

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

69.0000

1

1



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

69

58545

69

860652 (x 12) BE 10/07/27

D3275-1

Manufactured No

190

Each

17.0000

12

12



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

17

53453

8

57513

9

860653 (3) SEE 10/07/27

CR3212-4-03

Purchased No

250

Each

3,739.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

3739

111359

5

112314

30

114436

1142

114450

564

114859

1998

ml 10.08.24

D3415-041

Manufactured No

250

Each

61.0000

1

1



Nut Plate

Location

Loc Qty

Loc Code

ST056

61

33842

61

ml 10.08.24

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Shop Packet Print

Page 2

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

250

Each

540.0000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

540

112314

4

113539

60

113973

476

MA 10-08-24

ALS4-1032-130

Purchased

No

250

Each

4,506.000

78

78



Insert

Location

Loc Qty

Loc Code

PKG11

4190

114723

4190

ST282

277

110511

38

114407

239

ST381

39

114654

39

MA 10-08-24

D3536-15

Manufactured

No

270

Each

13.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP

6

56055

6

FP11

7

59238

7

MA 10-08-24

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-23 Manufactured No

270 Each

6.0000

1 1



Gasket

B# 60234(A)

Location

Loc Qty

Loc Code

FP011

6

58819

6

D3536-35 Manufactured No

270 Each

11.0000

1 1



Gasket

B60235(A)

Location

Loc Qty

Loc Code

FP012

11

58683

11

D3536-39 Manufactured No

270 Each

21.0000

1 1



Gasket

Location

Loc Qty

Loc Code

FP12

21

58215

7

58571

14

D3535-15 Manufactured No

270 Each

10.0000

1 1



Wearshoe

Location

Loc Qty

Loc Code

FP18

10

59236

10

D3535-35 Manufactured No

270 Each

7.0000

1 1



Wearshoe

B# 60232

Location

Loc Qty

Loc Code

FP018

7

59237

7

Thursday, July 15, 2010 10:23:58 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:23:58 AM

Page 5

Work Order ID: 60606

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-39
Wearshoe

Manufactured No

270

Each

8.0000

1

1

Location

Loc Qty

Loc Code

FP18

8

58214

8

D3535-23
Wearshoe

Manufactured No

270

Each

5.0000

1

1

Location

Loc Qty

Loc Code

FP21

5

57730

5

D3537-3
Wearpad

Manufactured No

270

Each

20.0000

1

1

Location

Loc Qty

Loc Code

FP17

4

57512

4

FP19

16

59711

16

D3537-1
Wearpad

Manufactured No

270

Each

44.0000

9

9

Location

Loc Qty

Loc Code

FP

1

55465

1

FP17

43

57713

3

59593

40

10.08.24

10.08.24

10.08.24

10.08.24

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Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:23:58 AM

Page 6

Work Order ID: 60606



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased

No

270

Each

0.0000

80

80

B 115000



washer

AN960C416 NAS1149C0463 Purchased

No

270

Each

113.0000

1

1

ml 10.08.24



washer

Location

Loc Qty

Loc Code

ST346

113

100993

113

D3672-1 Manufactured

No

270

Each

1,033.000

2

2

ml 10.08.24



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

1033

51674

33

52505

1000

AN3C4A Purchased

No

270

Each

1,559.000

80

80

ml 10.08.24



BOLT

Location

Loc Qty

Loc Code

ST350

1559

114103

501

114108

14

114416

12

114523

2

114859

30

114941

1000

ml 10.08.24

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:23:58 AM

Page 7

Work Order ID: 60606



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C5A
BOLT
Purchased No

270 Each 513.0000 1 1



Location

Loc Qty

Loc Code

ST346

513

110552

13

112243

500

D2646
Aft Cap
Manufactured No

270 Each 94.0000 1 1



Location

Loc Qty

Loc Code

FP-4

85

57332

85

FP6

9

52663

9

D3413-1
Ring
Manufactured No

270 Each 31.0000 1 1



Location

Loc Qty

Loc Code

ST473

31

51586

1

53446

23

58524

7

B# 61322

mt 10-08-24

mt 10-08-24

mt 10-08-24

Thursday, July 15, 2010 10:23:58 AM

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Page 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____



NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RT
SHOP
RETURN
ENGINEER
CONTROLLED
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

0000

DESIGN CP		DRAWN BY PH		DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED 		APPROVED 		DRAWING NO. D3274	
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY		REV. D SHEET 1 OF 4	
A	04.03.15	NEW ISSUE			
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76			
C	05.03.16	ADD -043; NEW INSERTS			
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET			

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

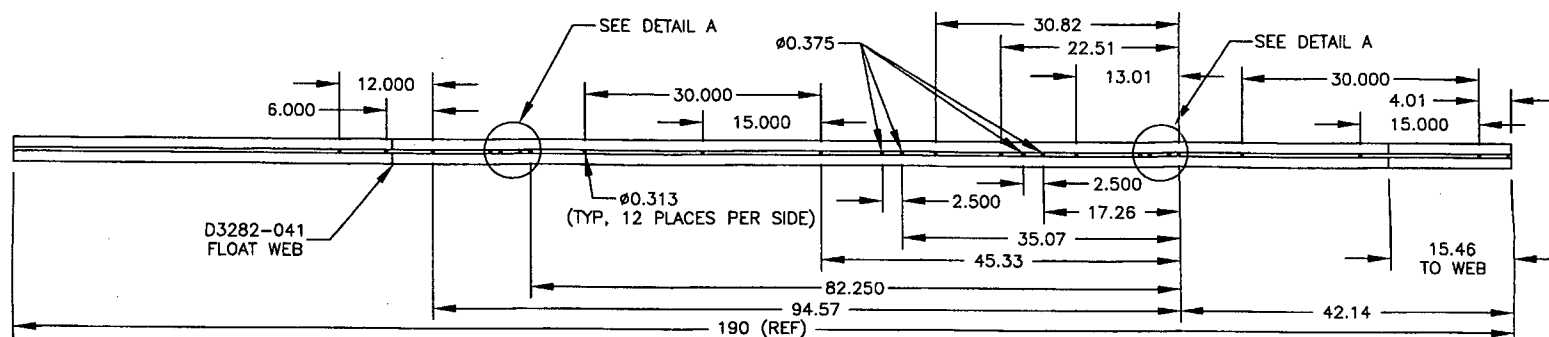
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

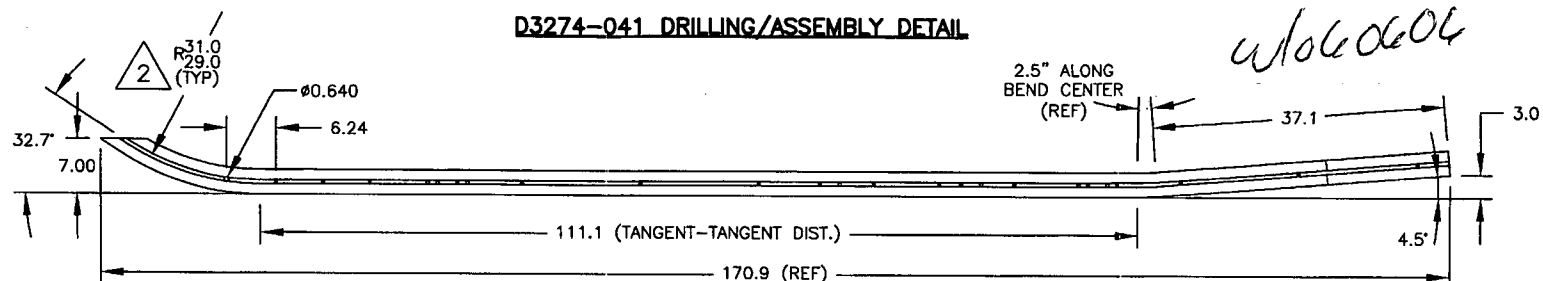
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

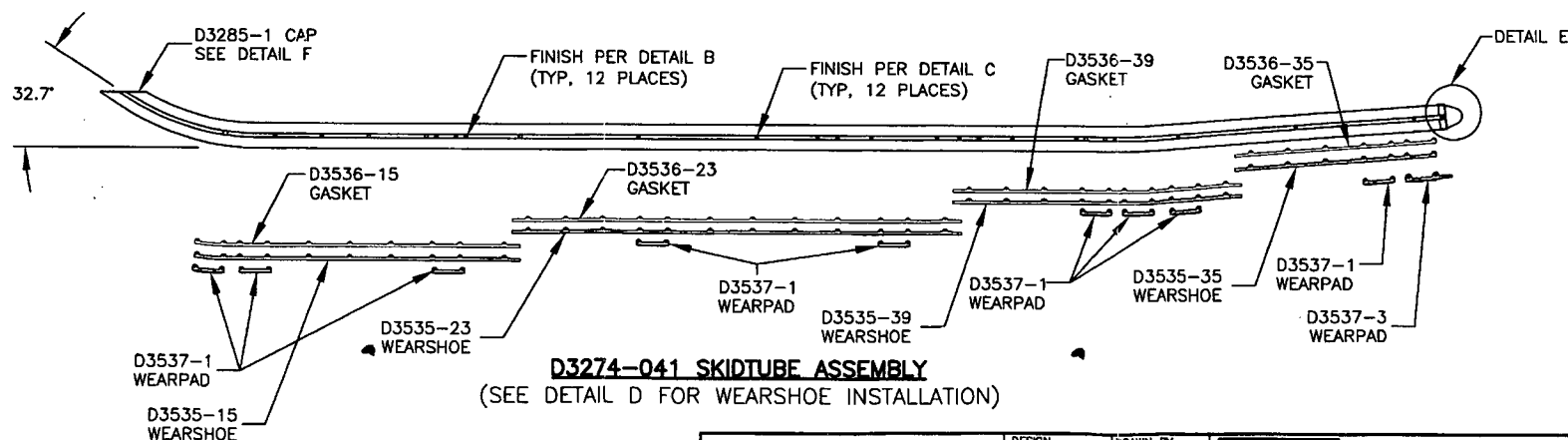
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



RELEASED

07.02.12

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DESIGN

DRAWN BY

DART

DART AEROSPACE USA, INC.
PORT HARTOCK, WA

CHECKED

APPROVED

1	DRAWING NO.
---	-------------

REV. D

DATE _____

TITLE	SKIDTUBE ASSEMBLY
-------	-------------------

SCALE

1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

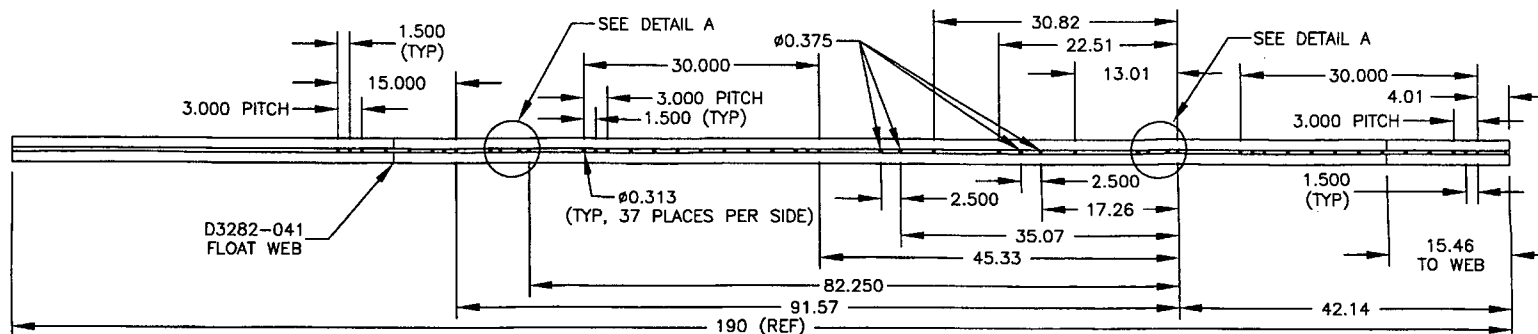
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

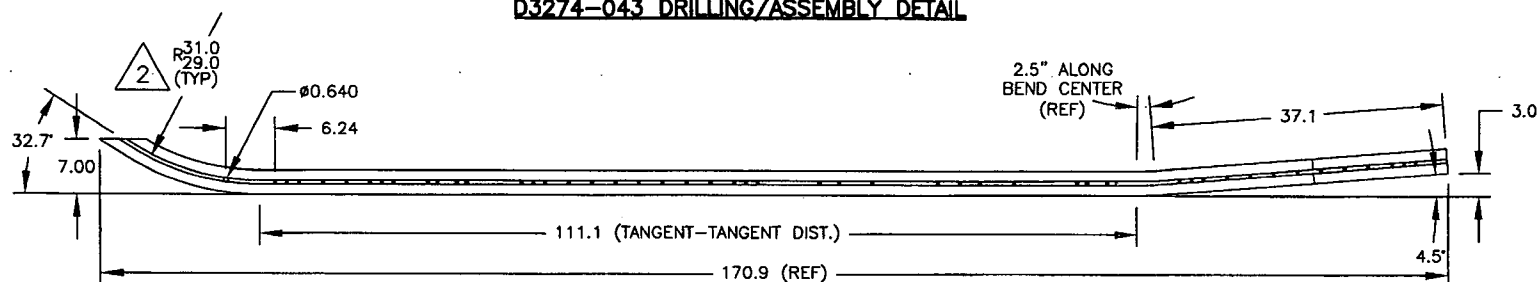
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

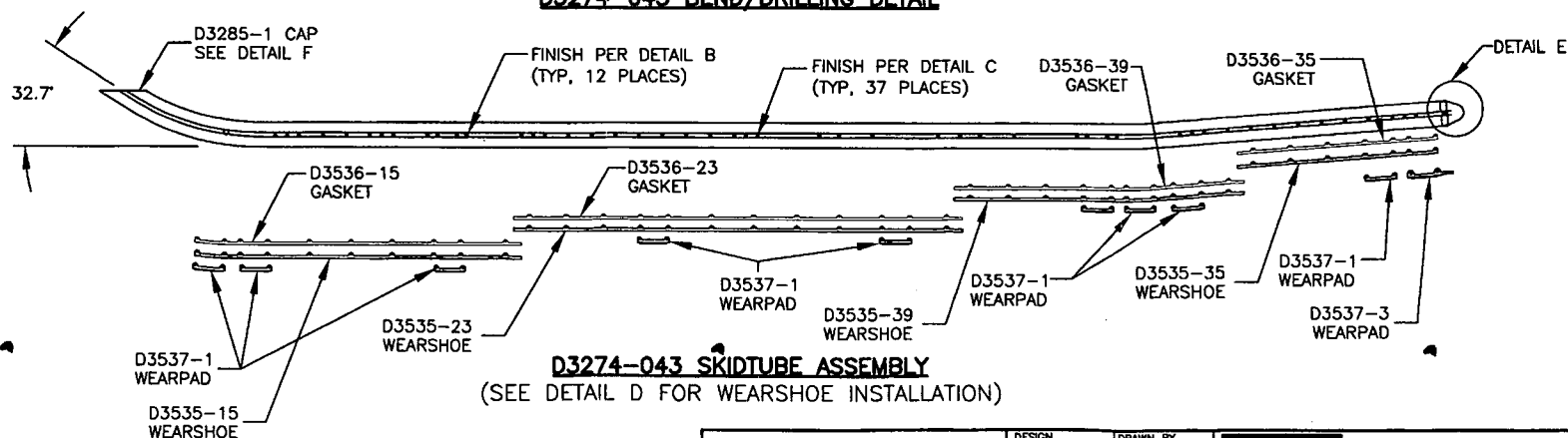
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

W/O 40604

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CHECKED	APPROVED	DATE	DRAWING NO.	REV. D
#	#	06.12.19	D3274	SHEET 3 OF 4
			TITLE	SCALE
			SKIDTUBE ASSEMBLY	1:15

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

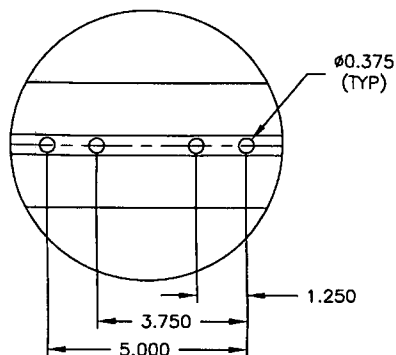
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

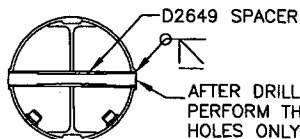
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

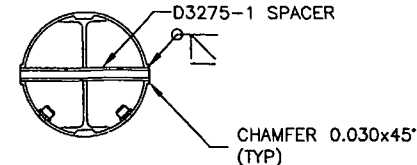


DETAIL B FOR $\phi 0.375$ HOLES ONLY



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.375$
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO $\phi 0.313 \times 0.75$ DEEP

DETAIL C FOR $\phi 0.313$ HOLES ONLY

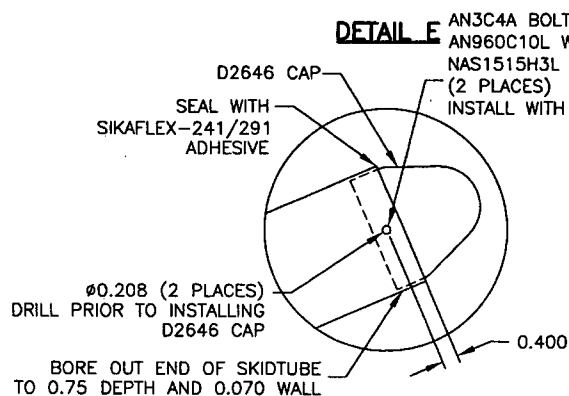


DETAIL D

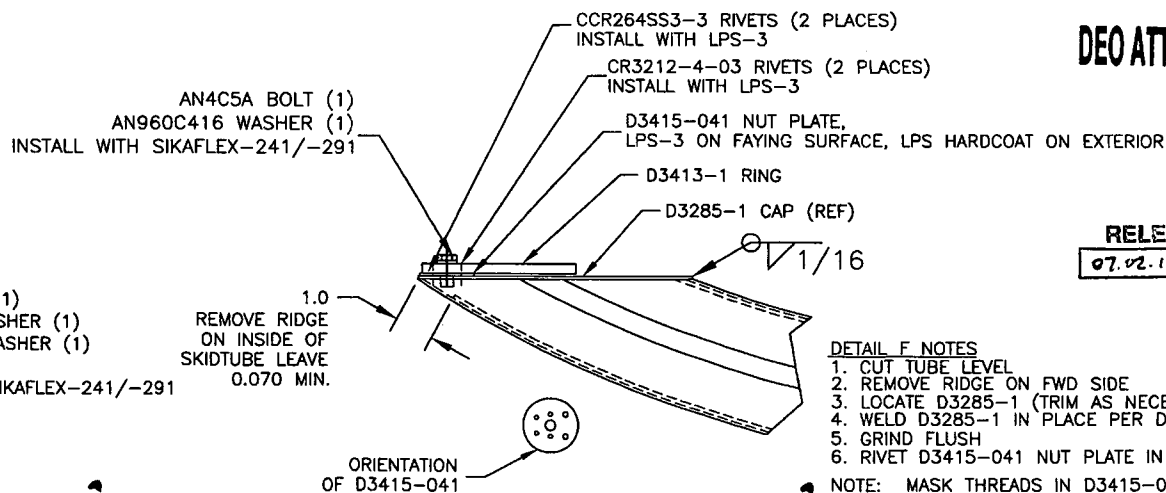


ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(7B PLACES)
GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E



DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED
07.02.12

DETAIL F NOTES
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE
NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	H	APPROVED	H	DART	PORT HADLOCK, WA
DATE	06.12.19	DRAWING NO.	D3274	REV. D	SHEET 4 OF 4
		TITLE	SKIDTUBE ASSEMBLY	SCALE	1:3

WLO 60606

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

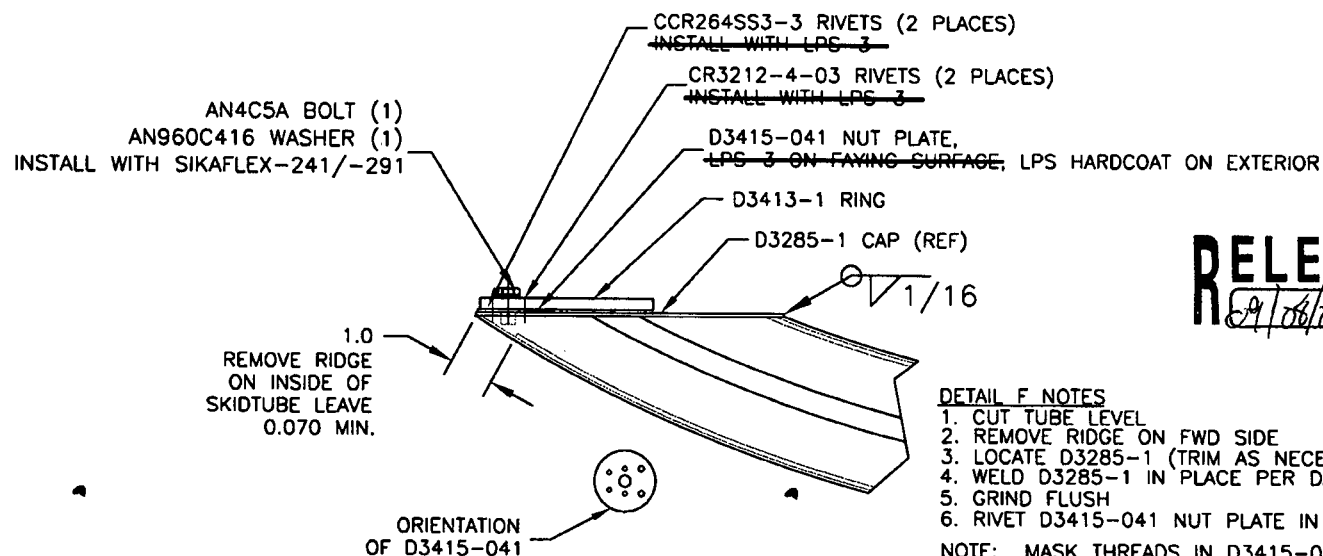
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23		DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/23

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

w/o 60606

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Bordley Elliott
Job number: 59780
Part number: D200-642-541
Description: 200 skid tube
Welding Process: Tig~~h~~ Mig~~h~~ ☐
Base material: Aluminium
Current: AC~~h~~ DC~~h~~ ☐

TEST REQUIREMENTS AND RESULTS

Visual:
Penetration:

pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐

UNACCEPTABLE

Cracks:
Undercut:
Pin holes:
Overlap (cold lap)
Porosity (surface):
Coloration:

pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐
pass~~h~~ fail~~h~~ ☐

Qualifier P. H. H.

Date of Test Coupon 10.07.01

Welder Bordley Elliott

Date of Test Coupon 10.07.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld